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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,964	08/05/2003	Zhendong Liu	02039US	6941

61611 7590 03/26/2007  
ROHM AND HAAS ELECTRONIC MATERIALS  
CMP HOLDINGS, INC.  
451 BELLEVUE ROAD  
NEWARK, DE 19713

EXAMINER
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GEORGE, PATRICIA ANN

ART UNIT	PAPER NUMBER
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1765

MAIL DATE	DELIVERY MODE
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03/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/634,964

Applicant(s)

LIU, ZHENDONG

Examiner

Patricia A. George

Art Unit

1765

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 13 March 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 5 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☒ The Notice of Appeal was filed on 13 March 2007. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: Please see next page. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 1, 2 and 4-6.  
Claim(s) withdrawn from consideration: 8 and 9.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
Please see next page.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☒ Other: \_\_\_\_\_.

  
**SHAMIM AHMED  
PRIMARY EXAMINER**

Cont. of 3.

The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because the amendment to claim 5 raises new issue because it was not considered.

Cont. of 11.

The request for reconsideration has been considered but does not place the application in condition for allowance because:

The art rejection of relied upon in the office action of 2/05/2007, to reject claims 1, 2, and 4-6, under 35 U.S.C. § 103(a) as being unpatentable over Sun et al. (U'S Pat. No. 6,709,316) in view of Sherbet et al. (US Pat. No. 5,858,813) as evidenced by Changzhou Kejia Chemical Co. (Product Data: Poly (Maleic Acid)) and Wikipedia; Maleic Acid.

Applicant's summarizes the prior art rejection, on pages 8-9, examiner disagree with the summary. Although the reference of Sun et al. teaches use of multiple slurries, the reference of Sun et al. is clearly relied on for the teaching of only one of the said slurries, which teach all of applicants limitations, except the addition of polymaleic acid, not a combination of slurries as applicants assert, on pages 8-9.

Applicants' assert, on page 9, that the reference of Ms. Debra Scherber, relied on the remedy the use of polymaleic acid, do not teaches use of polymaleic acid for a barrier slurry. Examiner agree that the reference of Scherber do not explicitly teach use of polymaleic acid, however, like Sun et al., the reference of Scherber does teach CMP slurry with selectivity to barrier films, which indicate the removal of barrier films clearly occur. Also, the reference of Scherber teaches use of derivatives of maleic acid.

Applicants continue to argue, on page 9, that the rejection combines 5 articles, when examiner only find three from the listing that are used in the art rejection.

Applicant assert, on page 9, as well as in remarks filed previously, that in house chemist, Dr. Liu, that bulk copper slurries teach away use for barrier removal because of the primary function, however examiner stands that although the composition is primarily used to remove metal, is well proven that is is also used to removing tantalum nitride. Applicants' limitations are clearly toward compositions, therefore this line of argument is not persuasive because the tantalum removal rate of the solution is properly ascribed to the solution, and not an active process step.

Applicants assert, on page 9, that the reference of Scherber teach away the combined references, because Scherber use organic acids as chelating agents and polymerizing the chelating will reduce its effectiveness, however evidence is provided that the reference of Scherber at al. disclose use maleic acid which is in fact a homopolymer polymaleic acid (i.e. poly maleic acid), which is already a polymer.

Applicants' argue, on page 10, that the reference of Sun et al. disclose a pH below 4, only for a particular step not applicable, examiner disagree. Sun et al. and Scherber both disclose the pH adjusting agents can be adjusted based on the composition, and include ph adjusting agent/s that can adjust the CMP composition, and Sun et al. a ranges of 2.5 to about 11, and about 4, which encompassed the claimed less than 4.

#### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia A. George whose telephone number is (571) 272-5955. The examiner can normally be reached on Tues. - Sat. between 8:00 am and 4:00 pm.

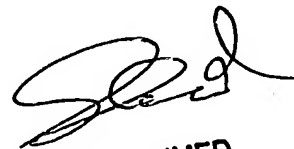
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patricia A George Examiner Art Unit 1765

PAG  
03/07



SHAMIM AHMED  
PRIMARY EXAMINER